

Issue 200

PS

1969 Series

THE
PREVENTIVE
MAINTENANCE
MONTHLY



Carl Egan

HELP

...WHEN YOU NEED IT!

When it comes to maintenance and supply, every unit in a war has problems that get you—and your outfit—down.

So, what do you do? Call "HELP!"

Real loud. Actually, get your CO or your maintenance officer to get the SOS off to your own direct support unit. A phone call will do it.

Either your CO will provide the help you need from among its own specialists, or they'll see to it that the word gets to the nearest U.S. Army Materiel Command equipment technician or maintenance/supply management representative.

These civilian technicians and representatives are located at most places around the Army and are available to help units in real tough situations. They are specialists on particular kinds of equipment or in maintenance or supply systems and procedures.

They won't fix your equipment for you, but they will provide you a "job-it-yourself kit" using "on-the-job" or classroom training techniques, covering such subjects as supply maintenance, DSC, equipment records and new equipment. They can help interpret and apply maintenance and supply policies and procedures, help set up and update PUL and show your unit how to get enough and the right kind of repair parts, equipment and trained maintenance men. They also can help you get enough of the right publications for operating and maintaining your equipment.

Now . . . yell for help. Give the word to your DSM.



PS

FOR MORE INFORMATION, CONTACT
DIRECTOR, ARMY MATERIEL COMMAND
ATTN: EQUIPMENT MAINTENANCE
AND SUPPLY
3601 DOWNEY AVE.
FORT BELLEVILLE, ILL. 62205
(312) 265-2000

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DIRECTOR, ARMY MATERIEL COMMAND
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AND SUPPLY
3601 DOWNEY AVE.
FORT BELLEVILLE, ILL. 62205
(312) 265-2000

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SUPPLY

TO HAVE IN
THE SHOP...

YOU GOTTA BE CARD SHARP

This story is in living pictures. It's intended for anyone who's worried from being told he's the new card dealer and shuffler for his unit's repair parts supply operation.

For the next check treatment... make a quick glance at DA Form 2355 (Request for Issue or Transfer).



YOU'VE GOT
TO APPROACH
THIS FORM
FROM AN
OPERATIONAL
ANGLE... SO
REMEMBER
THREE THING
NEEDS!

NEEDS LIST

No one person
is responsible
for filling in
the entire
form.

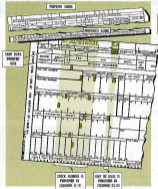
It was built
for punch
card machine
operators
to use, too.

Everything
printed along
the top is also
machine
punched into
the same
card—boxed!



If you'll promise to hold your coffee cup steady and dry your eyes, you might try focusing along the bottom row of the 104 Form 3799 card. Notice that the contents of the 50 punch columns is labeled right above the column numbers. This is the prepunch guide for the machine operator as it's no read for you.

Along the top are the price spaces and their identifying labels. This is the prepunch guide for you—the supply type.



WITHOUT A PREPRINT (PREPUNCH)

With a supply head has no preprint — prepunch card, send a blank or this and follow the circular card number route to fill in the form.

BLOCK I

Cardinal Street Number equal to destination, but per supply request.

BLOCKS 4 - 6

Indexed block number (40) or Post Number (50) indicates your zip from your address and 90 to an 800 when you find the same in Block 6 time.

BLOCK 7

End of time is supply and last — except for block, sub-extended or small time.

BLOCK C1

Include today's date and add the next open card number or use the form 204 document before the supply request.



BLOCK L

Quantity numbers used in a preprint card for 800 time, to use the space with additional quantity card.

BLOCK M

Name or short description on document or card.

BLOCK 20

Supply Code. An supply request, look in Appendix B of Group 1 100 New 80 to 44 100-20 100 100, or 44 100-20 100 100.

BLOCK 13

See "F" heading when F1 is available demand, the "F" for non-recurring demand.

BLOCK 15

See Identification Code (80) assigned to destination, add your supply request. Request is 40 10-20 Jan 17 14 10 50 1000 48 00000.

BLOCK O

Material supply type, size, lot, date and page number. Check your request when possible.

BLOCK P

Department Head Designer (80) document identification. Block 20 you can use... linked to your address request from Supply Request (80). See form in Appendix B to 44 100-20.



WITH A PREPRINT (PREPUNCH)

DON'T REPEAT
REPROCESSED INFO
AND IMMEDIATELY
DATA

STATION		BLOCK		CIRCUIT	
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54
55	56	57	58	59	60
61	62	63	64	65	66
67	68	69	70	71	72
73	74	75	76	77	78
79	80	81	82	83	84
85	86	87	88	89	90
91	92	93	94	95	96
97	98	99	100	101	102

PREPRINTS ARE
PROCESSED WITH
REPROCESSED OF ALL
ITEMS ONLY TWO
REPROCESSED ITEMS.
BLOCKS ARE IN
WHOLE FILE.



HOW A S.A.L.E.S. & S. REPRODUCED PREPRINTS

THE FIRST SOURCE



1—Materials start you off
with a request including
the data for Block 10... 15
... 20... 25... 30...



2—Supply request tells you
where Block 10... 15
... 20... 25... 30...



3—Document Register up-
dates Block 10 codes.

HOW NEXT



Always place a "X" in the first space of
Block 12 and the correct response sys-
tem code in Block 18. This code is
reduced from Appendix T of Change 1
to AR 750-11. By this time it should be
obvious that you can't operate your end
of the supply system without a copy of
AR 750-55.

A NARA (not operationally ready)
supply demand means two more so.

WITH A TURN-IN

The quantity, normally, goes into Block 19 instead of 1 and none of the
Blocks 15, 26 or 27 codes are needed. But please remember to include the
correct code in Block 19 for this:



THE CODE
IS REPRODUCED
UNDER APPROPRIATE
BLOCK

10 101 — 100 102 AND 103
10 104 — 105 106 107
10 108 — 109 110 111

OPPORTUNITY — RECOVERABILITY

COULD YOU SUPPORT
 THE INTERESTS OF
 AN MCO DRINKER WANTED
 ON A 20-CAL. WINE
 OR PER. THE B. CODE
 215 - 25 77
 HOW... WHY?

All the goodness to help you keep your gear combat ready won't help on the shelf just waiting for you to whistle. Some of the items you'll need have to be made up from stock material, or special-ordered, or made local (preferred).



IT'S AS SIMPLE AS DRINKING YOUR CODES!



That's where the OMB codes come in. They combine to tell you how an item's supplied, who can install, assemble or repair it, and if it's recoverable. You might say the codes pay an item's status in the supply and maintenance system to help you, and recognize the recovered, repair authorized items from the right supply source.

When you know your codes you can save time, and work and avoid repair parts and maintenance delays. And, you also help the supply system, because you'll not be overwhelming it with stray requests, which create unnecessary paperwork, research and back-tracking correspondence.

You'll find the codes listed ahead of just about everything else in a manual. In fact, in the new RPARTL's (Repair Parts and Special Tool List), the OEM codes occupy the first column in the listings. The key to the codes is given in a manual's introduction section.

If you ever have any problems with the codes, check with support . . . their supply records are updated regularly, and they've got the latest word on any item's codes.

LET'S LOOK AT HOW THEY WORK
FIRST, THE SOURCE CODES.



OEM	MEANING
A	Assemblies which are not stocked as such. They're made up of 1 or more separate OEM parts in the supply system. The separate parts are stocked by the maintenance level indicated by the maintenance code listed alongside the A.
C	Repair parts NOT for local purchase. See F11-30 and local procedures (20%), if the items are not available locally, support requisition them through normal supply channels.
G	Major assemblies, purchased for initial issue only by DC activities. The assemblies are not stocked above G-level.
M	Repair parts that are to be manufactured at the maintenance level called out by the maintenance code shown for the item.

Get More
Repair
Info at
YOURSELF



P

Items that are stocked in the supply system. And, they're available from supply request through regular supply channels.

If you had the F Source code coupled with a number 01, P1 or P10, for example in the same column, don't panic about the number. It's for support's info. All that's of interest to you is that it's a P item — so it takes routine support.

X

Items that are not in the supply system. The code calls out items that are supposed to last the life of the equipment. What will that mean . . . It's time to order the major and then.

X1

Repair parts that are not available by themselves. You need the rest together usually. The quantity is controlled by the level of maintenance fixed with the equipment.

X1	0			HOUSING: start
P	0	8306-042-5022		(1800-8745-66)
X1	0			SCREW, ASSY
P	0	8306-042-5001		(0100-4200)
P	0			COVER: starter
P	0	8306-042-5001		(1800-8745-66)
P	0	2893-858-8038		SCREW, ASSY
				(2140-8700)
				COVER, ELECT
				REPAIR KIT

X2

Repair parts to be installed (all P1-P10, if support can't get the parts from a Gen part), they'll order 'em through normal supply channels, but they'll have to provide justification along with the requisition.



SECOND,
THE
MAINTENANCE
CODES
ARE
UP.



CODE	MAINTENANCE CODE
C	Core or general
D	Departmental
F	First support
H	General support
R	Repair

AND THIRD, THE
RECOVERABILITY
CODE.



CODE

NAME

R

Repair parts and assemblies that are economically repairable at direct support or general support shops. You normally get them through EX (Items Exchange). You simply swap support an un-serviceable item for a like serviceable item. All you do is fill out a DA Form 1482, attach it to the un-serviceable item and take it to the EX section that supports your work. Most of these items are carried in the EX list you get from the EX section.

CODE	NAME	DESCRIPTION	REMARKS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS
R	REPAIR PARTS	REPAIR PARTS	REPAIR PARTS



FOR MORE

S

Same as "B", also, when an item's not economically repairable at general support level, the item's passed on depot for checking and disposition.

T

High dollar value, measurable repair parts. They're EOC'd also, and they're re-marked for special attention in supply operations.

U

Repair parts to be salvaged to recycle, previous stored, critical materials or reusable castings or components.

NONE

Item's expendable.

HERE'RE SOME
EXAMPLES THAT
COMBOS.

**F-B-E**

Key: the item is from central storage. It's for organizational maintenance, and it's measurable normally thru EOC.

F-C-T

The item is in the supply system, installed by organizational maintenance and measurable because it's got a serial or readable tag.

B-E

Meets at organizational level.

B-C

Meets the next higher quantity and level at organizational level.

F-B-E

Item is in the supply system. Supportability B and F measurable.

B-E

Item installed at organizational level and supplied thru organizational.



BE YOUR OWN BOSS FOR ON THE ...

M73 MACHINE GUN

Yours, your 1.62-MM M73 co-axial machine gun's long since won its battle spots aboard M1A1 and M48-series tanks, M716 combat engineer vehicles and M551 Sheridan.



But it's had a lot of design and improvement since the first model backed "grunt" orders. This inspection guide's geared to the M73 you've got in your line fire hands right now.

The hold type device can pass on the decide situation, but get on 'em all and, if there's any you can't handle yourself, get the message to your company.

NOTE— NEVER USE APPROXIMATES—LIVE CROCOD- CLOTH OR RIBBON WOOL—TO CLEAN THE RINGS ON THE Muzzle END OF THE BARREL OR THE BARREL MOUNTING, — LIVE ROPE CLEANER, AND GRASS.





HOW, LET'S MAKE IT BY THE NUMBERS



1. Barrel and Barrel Jacket with Bearing

BARREL HEAVY — Bent, cracked, twisted, loose in mounting block.

If the bend or dent is big enough, it can cause faulty firing by keeping the barrel from moving freely. You want to make sure the barrel jacket won't bind against the mounting tube. You can check this way while you're transporting.

BARREL LOCKING — Missing, twisted, won't keep barrel from rotating, spring pin damaged, missing, won't lock.

First production models of the M42 have a spring-retained lock. Since that'll fit the barrel assembly in installed upside down and not engaged with the barrel bearing.

You can't mistake this on the new bearing. The new must fit in one way only and you slip in a spring pin to hold it in place.

MOUNTING BLOCK — Cracked, broken, retaining legs damaged. The bottom lip of the block that engages the recessed portion of the barrel must be free of burrs.

Watch this! Don't let this leave you. The barrel jacket measuring to P/N 1001-004-0715 (140) (400) has a downward angle on its mounting block, but none of the other barrel jackets have this feature. This angle aids in entering the receiver in the installed position without jacking the disconnector ring. Don't go with what you're got. You can't swap off. You can see either of these.



BARREL POSITION — Bent, jagged, cracked, bore badly pitted, coated with rust (prevents the outside lock from being used), chamber dirty, rusty, under-bored, barrel not truly straight.



Get my telescope?



FORGODS — PITY FORGODS?

MORTAR BEARING — Cracked, threads of either end damaged, barrel rusty.

All M42 mortar gunnys should use them for new barrel bearing P/N 1001-004-0705 and new barrel bearing lock P/N 1001-004-0740. Get them now P/N 1001-004-0705 to check the M42's stock number changes from P/N 1001-074-0705 to P/N 1001-004-0740.

MORTAR BEARING LOCK — Damaged, missing, not stated.

Grab this tip: When you give your specifications to the boss, don't consider the expansion ring at the end of the mortar tube for a defect. This ring's about 3 inches from the chamber end. Look for pins, scratches and wall-thin throughout the bore.



FLASH ATTACHMENTS



FLASH SUPPRESSOR — Faded or body cracked, faded, body corroded inside threads turned, dirty, lock not stated.



The flash ridge (POM 1005-022-0771) and flash suppressor (POM 1005-002-0017) come under the heading of "lock" to go along with your vehicle EEL. It's a good idea to eyeball each while it's removed on the barrel jacket and again when you reinsert it for cleaning. The flash ridge is installed with a barrel bearing lock, same as the suppressor and they're sealed to hold 'em in place. Both flash attachments are installed by using your adjusting wrench (POM 1120-204-3799) to get them right.



FLASH RIDGE — Cracked, sharp edges, corroded, faded with oil, inside threads turned, dirty, lock not stated.

The carbon scraper's been drilled from the end for and not replaced.

2. Cover Group



COVER ASSEMBLY — Retainer bracket with bushed cover loose, rivets loose, cover broken fast, brackets feed cam located spring broken, deformed.

Pass an eye hooked for cracks in the 4 retainer bracket webs. If any crack's over 1/4 inch long, get yourself a new cover.



FEED TRACK ASSEMBLY — Fitted, cracked, edges rough retaining posts and track worn, broken, springs weak, kinked, bent.



FEED SUPPORT ASSEMBLY — Bent, deformed, won't fit in cover group, edges bent, worn, cartridge slippage and cartridge diameter worn, cracked, won't work right, pins worn, bent, bushed, interfere with feed cam during operation, retainer tall broken, missing.



FEED SLIDE ASSEMBLY — Spring weak, worn, broken, locks broken, feed pawl broken, worn, teeth cracked, bent, retaining ring split, missing.



FEED CAM — Bent, broken, cracked, worn.



"SORRY ABOUT THAT!"

balls

"EASY WHEN HANDLING THE SHOT BARREL... BRICKING A BUREAU OFFER SOME THREATS CAN RUN THE MERRY."



3. Feed Tray Group

FEED TRAY ASSEMBLY — Feed tray broken, loose, tracks split, cracked, rollers split open, too tight, burned, dirty worn, bent, loose, missing.



CARTRIDGE STOP ASSEMBLY — Bent out of line, worn, cracked, broken.

WHICH FEED IT? AND ITS

The M79 is the M16's cousin and M16A1's cousin, and M16A1's cousin, too. It's a hybrid bird, but in the M79's case it could be either right-handed or left-handed bird. The double-track that all parts of the cover and feed tray assembly are put together with the same forward-looking angle.

Here's something: If you have the feed tray assembled for right-handed feed, *Friendzone*, and then happen to put the feed tray in backward (starting with the bottom—L's and R's—in the rear), you could load the weapon and close the cover. BUT the weapon won't chamber and fire 'cause the critical parts of the feed tray would show in to the rear.



In feed it or you lose: The side part of the feed tray slot — just like the bottom — must always be toward the rear. It's end of the technique.

DRIVING SPRING (LOCK RINGS) — Ends bent, rotating plus missing, loose, bent, burned.

The guide grooves shouldn't be bent 'cause they have to fit snug.

SPRINGS — Bent, weak, broken. (Both springs should be about the same length—and at least 5 inches long.)



4. Back Plate Assembly

IF ANYTHING GOES GARLISHED ON THESE COMPONENTS... YOU'RE NOT AUTHORIZED TO "MAD 'EM AWAY"... SO CALL YOUR ARMORER!



SOLENOID — Cracked, loose.

TRIGGER SPRINGS — Broken, weak (don't have enough force to return trigger and trigger seat to original position).

WAGON — Bent, broken, worn (should be no up or down movement of the trigger).

BACK PLATE — Bent, cracked, broken.

BOUNDED Yoke — Bent, cracked.

WHAT'S A BOUNDED Yoke?

TRIGGER SAFETY SPRING — Won't keep safety in either direction.

HELP

SOLENOID LEVER PIN — Not seated at both ends.

TRIGGER SEAR — Broken, burned, worn.

TRIGGER SAFETY — Worn, cracked, broken.

The safety, when positioned in safe (S) blocks the trigger so that the weapon cannot be functioned accidentally.

Relocating the rear from the forward position. If it won't do this, you're safe.

TRIGGER PIVOT PIN — Not fixed at both ends.

Here's a Don't-Do-it-Yourself tip: If you had any loose parts around the back plate, call in your armorer! For more information call 800-...

5. Barrel Extension Group



Now hear this: All M13's should now have the barrel extension assembly that comes under PN 1085-927-8134 (130A3389). If you have one with a different stock number, get it switched.

Keep a sharp eye on the little things in this case—little springs and pins, especially. Make sure they're all present and shaped-up.

A couple of other thoughts. The groove of the breechblock must engage

the bottom rail on the right side of the receiver. If the breechblock's not engaged to the receiver rail, the barrel extension won't go all the way forward like it should. So, watch for this common error in installing. When installing the barrel extension group into the receiver, the breechblock must be flush with the right side of the barrel extension. The mistake's so easy to make . . . and so hard to correct later on.



Keep this in mind! The barrel extension must be forward when you install the jacket assembly with the barrel to the receiver. If it's not forward, the barrel just won't engage the barrel extension.



HAMMER ASSEMBLY — Parts worn, cracked, broken, missing. (The retaining pin screw could rotate right out of them, so watch it.)

HAMMER LINK ASSEMBLY — Pin loose.

RATE CONTROL PINE — Pine, spring broken, missing. If the spring's missing, you can't depend on your weapon firing all the time.

BARREL EXTENSION — Broken, deformed, cracked, badly worn.



FIRING STUDS — Broken, cracked, won't work, spring missing, broken.

RAMMER — Broken, bent, burned.



EXTRACTOR — Lip broken, worn, burned, spring weak.

TRIGGER SEAR NOTCHES OR BARREL EXTENSION — Worn, rounded off.

LEVER ASSEMBLY — Pin missing, loose, worn, cracked, broken, return light, binding.

SEAR SPRING — Don't work (should rotate rear to forward position).



HAMMER SEAR — Broken, worn.



HAMMER SEAR SEAR — Not seated, loose (this may be stuck).

HAMMER SPRING AND FLINGER — Spring missing, plunger broken, split.

RIFLE NOTCHES — Broken, cracked, won't work.

DRIVE — Broken, cracked, worn.

CARTRIDGE CARRIER — Excessive binding; extractor catching projectiles broken, burned, badly worn.



SPRINGS — Don't give enough tension to grip.



WORK IN A
CLEAN AREA

FIRING PIN EXTENSION — Broken, deformed, associated spring missing. If the spring's missing, the firing pin extension'll stick out of the front end of the chamber assembly—or fall out!



BREECHBLOCK — Bent, cracked, broken.

BREECHBLOCK BOLLER — Missing, stuck (won't rotate).

FIRING PIN — Broken, badly worn.

FIRING PIN SPRING — Broken, weak (won't pull firing pin from face of breechblock).

HEY SARGE... THEY
SAID WE'VE GOT DOWN
INTO THEIR PADDOCKS...
WOULD THAT GO-ROD
BURN THE LOOK TO AN
EUREK' YESTERDAY'S
INSPECTION?!

6. Charger Group

THIS IS THE PART
WHERE YOU GAST TO
OVERLOOK A BENT
OR WARRID ITEM
LIKE A CHAIN LINK—
LOOK IT OVER
EXTRA CAREFUL!!



RETAINING UJG — Broken, bent out of shape.

CONNECTOR — 3x plate, bent, badly bent.

CHARGER ASSEMBLY — Doesn't fit right to receiver assembly, chain twisted (break) hold welding parts out of battery chain spring action work.

WINDING ASSEMBLY — Cracked, bent, distorted, threads stripped (check for smooth operation).

HANDLE — Bent, cracked, bent.

RETAINING RING — Missing, cracked, bent, spread. If it's not OK, you could lose the charger assembly!

7. Receiver Assembly

COVER LATCH RODS — Cracks in brackets will cause the lock bag, roll brackets, bent, cover latch rod spring work (they're coated and you can't see) bent, fat, bad-type spring bent, broken.



You gain by real careful not to damage the cover latches. Keep the rods forward when opening or removing the cover from the gun. These rods should automatically latch the cover when it's closed.

E-A-S-Y!
YOU'LL SAVE UP THE LATCHES IF YOU KEEP SLAMMING THE COVER WHILE THE RODS ARE TO THE REAR.



RECOVER BODY — Body cracked, bent, twisted, dented, broken, cracks in tail webbing less than 1/4 inch long.

SHO CONTROL GUIDE — Missing, loose.

SHO CONTROL GUIDE — Broken, badly spring weak, broken, retaining screws not seated.

DISCONNECTOR PULL RINGS — Broken, bent, missing, weak.

SHOER SUPPORT LEVER — Bent, no spring action if there's no spring action, the buffer support won't be held in the upper position.

SHOCKLOCK CAM — Broken, cracked, badly burred; broken black plunger or spring broken, missing.

LECTOR — Loose.

CHAMBER MOUNTING STUDS — Bent, bent, retaining lug ground worn, burred.

SHOER ASSEMBLY — Bushes broken, badly burred, won't catch on lugs of burred extension. If it needs adjusting, get for yourself!

SHOER PIVOT PIN — Broken, bent, worn, badly burred.

SHOCK ROLLER CAM — Broken, cracked, badly burred, worn, bent.

A BIG CAUSE OF BENT AND WORN PARTS IS JUST PLAIN DIRTY LUBE... AND LACK OF P. M.I.



**COMPARE
WHAT YOU HAVE
IN REPAIR PARTS
WITH THIS LIST...
TO GUARD AGAINST
WRONG CHGS.**



General Electric Assembly
FAX 1-800-767-6764

Westfield Assembly
FAX 1-800-767-6217

General Assembly
FAX 1-800-767-6764

Spring Springs (S)
FAX 1-800-884-7999

Waukegan Shop (S)
FAX 1-800-294-2971

**CHECK
WHAT YOU
HAVE WITH
THE SUPPLIER'S
BILL.**



TOOLS—Mixing, trowel, wring, etc.

Cleaning Tool Set
FAX 1-800-884-6217



Cleaning Tool Section (S)
FAX 1-800-767-6764



Rock Hole Section
FAX 1-800-767-6764



Box (Rock)
FAX 1-800-884-6764



Combination Tool
FAX 1-800-767-6764



Info-Kit, Washed (S)
FAX 1-800-884-6764



Resistor Block
FAX 1-800-884-6764



Resistor Case Extractor
FAX 1-800-884-6764



Repair Parts Box
FAX 1-800-767-6764



Cleaning Tool Handle
FAX 1-800-767-6764



Resistor Block
FAX 1-800-884-6764



Cleaning Tool Buffer
FAX 1-800-884-6764



Rock Hole
FAX 1-800-884-6764



Rock Hole Pin
FAX 1-800-884-6764



Red Tape
FAX 1-800-884-6764



Mixing Block
FAX 1-800-884-6764



PUBLICATIONS—Gathering dust. Depending on what vehicle you're doing these are the jobs you should have:

TM 9-1094-211-25 (May 67).



M80-series reader—TM 9-2110-115-10 (Feb 64) w/Changes, TM 9-2000-211-20 (Feb 66) w/Changes, TM 9-2090-211-20P (Jan 66).

M60-series reader—TM 9-2110-124-10 (Jan 60) w/Changes, TM 9-2110-124-20 (Jan 60) w/Changes, TM 9-2110-124-20P (Jan 60) w/Change.

M2070 (S)S—TM 9-2000-211-10 (Aug 64) w/Changes, TM 9-2110-122-20 (Sep 61) w/Changes, TM 9-2110-122-20P (Oct 61) w/Change.

M2011 (S)S—TM 9-2110-125-10 (Jan 60) w/Changes, TM 9-2090-210-20P2 (Jan 60).

For more information, see "Publications" on the inside cover.

M551 SHERIDAN TUBE LIFE



First all you have to find out what kind of tube you have, like the ...



No problem telling the difference between a deep and a shallow bay dot. They are both 1/4-in. dia. running straight through from launch to nozzle at the 6 o'clock position. The shallow one is the same depth as the grooves but the deep one is 3/64 inch deep which is about twice as deep as the rilling.

With an M551 or M551 (modified) tube you can run 300 EPC (equivalent full charge) rounds through before you need a new tube. With an M551E1 tube you can get 600 rounds.

All conventional rounds count 1 EPC each no matter what the model number of the round or whether or not it has an E after the model number.

Missile rounds are not counted at all



because they don't wear out the tube enough to matter.

EPC tube life and launch life is based on the number of conventional rounds fired, which is 600 rounds, and not on tube wear. When using the M551 or M551 (modified) gas launcher tube, the rounds don't equal the original plus 1 striking, and when using the M551E1 gas launcher tube, no striking.

By the way, when the launch is changed, that includes the launch coupling, the launch chamber and the obturator seal.

FIGURE OUT THE FIGURE COUNTER

DO YOU
OR
GOT
THAT?



Pull out your car plugs and listen to this. Your personal telescope might have a reading 1,000 miles down the counter that could just or give you a wrong reading. If you have one of these telescopes, you could have trouble.

THE TELESCOPE	THEIR SERIAL NUMBER	ON THE WHEEL
W 10	1001 to 1009	W 101 to W 110
W 11	1047 to 1056	W 106 to W 115

If you have one of the "telescope" bad ones, make this simple check every day ...

1. Turn your deflation knob back and you get the 3000 mil read (usually counter to any over 1000 reading — 1000, 2000, 3000 or whatever)

3000



2. Turn the new 1000 position from the deflation knob you turn counter-clockwise. All 4 numbers in the 3000 mil read counter window will change if the counter is working right.

2950



3. Now turn it back and all 4 numbers in the 3000 mil read counter window should change again, leaving you with the new 1000 number you started with when you first turned the deflation knob back a half turn.

3000



WARNING: should operate smoothly and all 4 windows should change in both counter-clockwise and clockwise operations. If not, you've got a bad counter ... call support.

JOE'S DOPE

WHAT
EVER
BECAME
OF
CASEY?



...BEST
MULTIFUEL
TRUCK OPERATOR
IN THE WHOLE
AREA!

WHAT
EVER
BECAME
OF
CASEY?

ALL
INFORMATION
IS
CONFIDENTIAL

FEAR LIKE THERE'RE SOME
GOOD GASOLINE ENGINE
OPERATORS COMING DOWN
THE PINE... BUT MATELUS,
PETERBY... AND THERE
SOMETHING ELSE!

YEP... CAREY USED TO SAY... "LIKE
SOME SASSY, MATELUS, AND
CAREY'LL TALKER WITH A LOT MORE,
BUT YOU KNOW THEM
DIFFERENT?"

I REMEMBER HOW HE RANDED
HIS TRUCK... REAL PRO LINE...

...NEVER TAKE OFF WITHOUT
DRAINING THE FUEL FILTERS!

AND SO
LIGHT,
DANDY!

ONE SPRAY OF
OIL ON A LFL
WATER GETS THERE...
AND YOUR FUEL
INJECTION PUMP
WON'T DEAD!

FUEL-CROWD AIR FILTERS
AND OIL FILTERS WILL
STOP YOU COLD, TOO.
AND FUEL-DEPENDENT
OIL IS SOME PANTS FOR
ANY ENGINE.

THE MORE OIL YOU USE
THE BETTER IN THE WOOD
OPTIM. YOU'VE GOT TO LOOK
ON THESE AIR FILTER ELEMENTS.

BLACK STRAIGHT SMOKE
AND LOTS OF SMOKE POWER
SUCKS UP YOUR OIL AND
PULVERIZES SMOKE WITH OIL
AND NEEDS CLEANING.

CHANGE ENGINE OIL AND OIL FILTER
ELEMENTS MORE OFTEN THAN
YOU'D CALL FOR WASH BUCKS!

NOT ONLY WAS HE SHARP ON ALL HIS BEFORE-OPERATION OR COUNT-
AND BATTERY DUTIES... BUT HE HAD A TRICK WHEN IT CAME TO
HYDROSTATIC LOCK...



WOULD IT? CHECK FOR HYDROSTATIC LOCK...
... FUEL OFF, ACCIDENTARY SWITCH ON, HAND
PUSH OR BLOWER BUTTON FOR JUST
2 OR 3 SECONDS.





Dope Sheet

Three cheers for the multifuel pro
 Whose truck has got lots of go --
 It's quick and it's strong,
 But if once he goes wrong
 He's in for a weekful of woe.



MULTIFUEL TRUCKS ARE DIFFERENT

- THEY NEED CAREFUL MAINTENANCE
- THEY NEED FILTERS EVERYDAY
- THEY NEED SPECIAL DRIVING KNOW-HOW
- THEY NEED REAL OPERATORS

THE MULTIFUEL TRUCK OPERATOR



WE HAVE THE WORLD'S BEST EQUIPMENT ... *Take care of it*

IF YOU WANT TO DISPLAY THIS ADVERTISING ON YOUR BUSINESS BOARD, ORDER SAMPLES, CUT IT OUT AND MAIL IT TO US.

HE WENT ALL THE WAY...
"NO" THINGS ABOUT
MUST BE...
COPING!



-EASY ON THAT STARTER,
BUT! GET THE LAST-FLYING
THINK-OUT-OF-SHOES-
THE ENGINE DROPS, ELSE YOU'LL
BURN THE STARTER!



WHEN STARTING
ABOUT 10-SECOND
EACH TRY IS ALL I
NEED... IF IT DOESN'T
CATCH AFTER THREE
TRIES... YOU'VE GOT
A PROBLEM!



AND KEEP THE LEAD FOOT
OFF THE ACCELERATOR
WHILE YOU'RE TAKING
OFF OR YOU'LL SHOOT THE
ENGINE UP PAST ITS
MAXIMUM RPM.



AT THIS TIME THE
TORQUE-CHARGER'S
SPEED AT LOW
SPEED RESPONSE
GAS PUMPED INTO
IT'S BURNER!

WANT A
SPEEDY
THROAT?



DO A PRO WARM UP AT 800
- 1000 RPM FOR ABOUT 5-8
MINUTES... BUT CAREFUL -
YOU'VE GOT TO BE CAREFUL -
YOU'VE GOT TO BE CAREFUL -
YOU'VE GOT TO BE CAREFUL -
YOU'VE GOT TO BE CAREFUL!



BEFORE YOU SHUT DOWN,
SOLE ABOUT 2 MINUTES... GIVE
THE TORQUE-CHARGER A CHANCE TO
SLOW DOWN FIRST AND GIVE
THE ENGINE ONE "GO!"



NEVER SHIFTS UP OR DOWN
NEVER SHIP GEAR. ...IF
YOU LOST THE SHOCK, THE VIBRATION
CAN BUST INTO ALL OVER
THE TRACK!



RIDING THE CLAY
IS WORSE! IT'S A GOOD
WAY TO BEND YOUR
KNEES, HAIR, AND FURRY!



COMIN' DOWN HILL DON'T
LET YOUR ENGINE
OVERSPEED!



KEEP THE THERMOMETER
BELOW 2000 RPM.



YEAH... I REMEMBER
HOW HE ALWAYS LEFT
A WELL-THOUGHT-OUT
...AND THE EVA PAM 320-0
RIGHT IN HIS POCKET TIL
HE LOST IT ALL DOWN
HILL.

LIKE HE GOT OUR
PLUG PEOPLE TO
GET AN EXTRA
COPIED BY WRITING
TO BALTHAZAR AIR
FOR CENTER ON A
OH, FORG IT!

HEY ROLL OUT
A WRECKER... WE
GOT AN EMERGENCY!





KEEP 'EM SEALED



Keep an eye peeled for FFE Storage Savings. He may be leading your way. How come?

Well, in his last search he found out that a certain DFWO kit had just the parts you're looking for. A little "consolidating" never hurt, was the way he put it.

But it hurt plenty when the time came to apply the DFWO. The missing part had to be manufactured again because the kit was a limited purchase, one-time deal . . . held up the rest of month.



Course FFE Storage Savings is not the same again . . . figured!

So, if he shows up this way, will ya?

Tell him to keep his conspackin' hands off DFWO kits.

Any job worth doing is worth doing right the first time. Taking blind engine, transmission and gear-box oil samples is no exception.

Why are accurate samples so important? Well, as long as you have moving parts you have friction. With friction you get heat and wear.

The oil system reduces the heat level to a point where no engine or transmission components are worn.

Since oil moves over, the lub keeps track of the weight of metal particles suspended in the oil in pure proportion. The assembly usually has a health record.

What happens when a contaminated sample goes to the spectrometer oil lab? Flawed!

The lab technician does a double take on a high iron, aluminum, copper, silver, chromium, magnesium or silicon count.

So, he does back a message telling for a special message to confirm the high wear pattern found on the last go 'round.

If the lab technician gets a normal reading on the message—nobody guffawed by taking a contaminated sample.

Course nobody expects correctable or unchangeable to put on a white hat and coat, but you can come up with accurate samples by taking 'em rightway.

First off, take the sample within 15 minutes of engine shut-down. If you're done any good (usually) you'll know why. Metal particles settle rightway quick and less particles in oil are an exception.

If you drain a sample from a cold engine you're likely to wind up with a bogus high metal wear reading. So you want to take samples with all particles in suspension, like in warm oil, man!



KEEP YOUR SAMPLES CLEAN! THE ONLY WAY...



THINK YOU'VE GOT ENOUGH?

NOPE!

HERE'S AN EXAMPLE OF A BOTTLE YOU SHOULD USE TO COLLECT SAMPLES.



THE MESSAGE

Be sure the seal that, after you've sampled, will be compressed before you give the oil.



Take out the oil dipstick. Open the sample bottle.

Get the seal off or remove the protective cap from the ends of the sampling tube.



Put the 1/2-in. ID tube into the dipstick hole being careful not to touch the side or bottom of the oil sump. This is slightly important since you don't want to pick up any sludge on the bottom of the sump. They will give you a bogus sample... unless it's sampling done for you and the lab!



Drive enough oil to fill about 1/2 of the bottle.

Roll the bottle with your finger and discharge your sample into the sample bottle. Fill the bottle to within 1/2 inch of the top.



Expunge the bottle cap tightly, put the dipstick back and close the sample tube.

Label the bottle with the lab's serial number. Fill out the 84 form (200 according to the pump in para 11, 43-1-104 1-4-68 or 28 25-44-000-1) as a questionnaire of analysis for the sample off to the lab, pronto.



FOLLOW THE CORPUS
HOSPITAL-CLEAN METHOD:
WHEN OILING, TO AVOID
COMING UP WITH A
CONTAMINATED SAMPLE.



If you sample a gear box with a locally made tool, such as the one shown on page 11 of *THE 194*, remember the disclaimer bit. Clean the tool before

and after use to prevent contamination of the sample.

When you have to take the sample from the bottom of a crankcase or oil reservoir, be sure to drain off at least a pint of the oil before you catch the sample. Like this:

Open the drain plug, magnetic plug hole, engine drain, oil tank drain or what have you. Drain about 1 pint (or a quart or larger crankcase) to make sure no sludge or dirt goes into the sample.

After you get the pint, continue the oil flow into the sample bottle and wrap the bottle. Be sure you never dip into the pint you drain off first because the sludge in it will smear the lab upon all the work with a high reading.

THE
OIL TEST
CAN TURN
UP SOMETHING
LIKE THIS.



FEB 1943 YOUR 1943



BURNED FEELS

BURNED
1943

Oil means, the oil sampling deal is a two-way street. You send the sample—the lab smokes you when they get a high wear-metal reading.

For example, say you have a broken piston ring on a recip. There is no noticeable effect in the performance of the engine—no knock, good compression, no power loss and the like.

Actually, the sharp edge of the broken ring begins to scrape the cylinder wall over so slightly. The ring begins to roll, wobble and chafe the piston.

The result is a vast increase in the number of aluminum, iron and chromium particles in the engine oil sample.

You may not know it, but you've got a cylinder and piston problem. Based on a test of the sample the lab will recommend an engine evaluation.

Never put on your laurels when a cylinder honing shows a broken ring, scored cylinder or valve head separation, no oil-eat-off.

The lab has to know the results of your intensive action. Remember that every engine, transmission and gear box has an individual wear pattern. Sometimes it takes several special samples to track down a faulty part.

If, per chance, a faulty component has to be sent to your supplier for repairs be sure you include the name and address where it was sent. Add the date the component was sent and the correct number of any IR's or other special reports on the part.

Remember that the follow code for spectroscopic oil analysis, 706-CTM 28-705 is used on a DA Form 2407, DA Form 2408-2 and DA Form 2400 when ever the action is the result of a lab recommendation.



DON'T RUN TO FLUSH

When you send a dirty oil sample to the oil lab and they can't make head nor tail out of it they'll ask for another one. No sweat.

The lab may also recommend draining and flushing of the component before taking the new sample.

Careful now, Flushing is a thorough cleaning of the inside of a component with strong solvents. Most of the lubricating oil will be washed away in the process.

A really engine, for one, should not get the flushing treatment unless it's really necessary. Then, SOP will call for a pre-oiling job so all the bone-dry parts get lubed.

Without pre-oiling after flushing internal parts will suffer friction damage when the engine is cranked up high!

Your best bet is to drain the component and skip the flushing. If the oil is still too dirty for the lab to get a reading, drain it again... and again.

BE A QUARTERBACK

You never get your signals crossed when holding a site, or getting the attention of a sharpshooter, right?

The signals involved in being a sharpshooter safely in the trenches, this calls for a little quarterbacking.

THE LANDING SITE SHOULD BE CLEAR OF TREES AND OBSTACLES

USE A RANGE BOARD TO GIVE THE PILOT THE PLANT AND DIRECTION

THROW YOUR ARMS FORWARD, MAJ!

...AND THEN USE THESE SIGNALS...



PLAYBOOK



PLAYBOOK



PLAYBOOK



COMMUNICATIONS

PROBLEM WITH PLATES

OPERATING WITHOUT PLATES, EHP

SEE OFFICER, TELL ME A P... TO CHECK!

Dear Herb Stein,

A problem

The serial number data plates are missing on some of our radio sets. Can you tell me how these data plates can be repositioned?

Also, will you be able to get a serial number back on the radio?

YFS A. L.

Dear Specialist A. L.,

The whole story's in CB 11-255 (Jan '71). This handy guide tells you about re-plateing of dog-plates, where to get 'em, who installs 'em, and under what conditions you request 'em.

How about



E-769...

SOLDER FOR A PRINTED CIRCUIT

Been wondering how great it'd be if you had a soldering iron for printed circuits?

Wonder no more. Somebody just didn't get the word there so you see the TL-791/11.

Not only is it No. 1 for printed circuits, but it has many other uses. Epochs Ch. 1 (30 Dec 69) or TD 565 112 for the good word. One caution: There's been a switch in the component limit on page 51 of the change.

Good for: PSN 3458-857-0881 and soldering. Iron: PSN 3458-857-0615 have been deleted. They've been replaced by Soldering Iron, Electric, PSN 3458-856-6298.

You get the whole soldering outfit, tips and all, with PSN 3458-853-6700.



SOLDERING IRON FOR PRINTED CIRCUITS

BYE, BYE FILTERS

HERE I GO! THIS
REALLY KICKS SOME
FILTER TIPS!

Dear Wolf-Man,

Power supplies PP-206/U and PP-207/U, used with the 48V100-C telephone control unit, have a place for an air filter at the bottom.

However, there is no air filter fitted in either the 22-100-2-100 or the 11-0001-248-209.

Wavelength: Would there be?

ED C. H.

GET THE MAIN GUN CLEAN



Dear Joseph C. M.,

MODEL 11-2106-1 (Star 93) vacuum air filters from the PP-206/U and PP-207/U power supplies because they disintegrated and caused circuitry damage from high temperatures.

With the filter gone, it pays for operator protection to replace the inner case and remove dust and dirt accumulation as necessary. This gun double where there's a lot of dust or high humidity.



BURN-OUT BUSTER

WAIT ONE!
BEFORE YOU BURN
OUT ANOTHER FUSE
ON YOUR T-1-T-1
TUBE RESOR,
CATCH THIS!



Turn the **LINE ADJUST CONTROL** counterclockwise as far as it'll go. Then, turn the **POWER** switch on. This cuts down input voltage. Place a reminder in your tube tray.



GROUND MOBILITY

TIRE KILLERS

MOST WHEELED EQUIPMENT ROLLS ON RUBBER... SO KEEP YOUR TIRES FROM GOING SOUTH EARLY BY LEAD... BE ON / FRONT!

NEVER DO "ONE" TIREMAN KILLERS



LOW-LOADING

...AND

THIS

UNDER INFLATION

OVER INFLATION

OVERLOAD

SHOULDERING

DRIVING OVER HOLES

NO!

OIL GREY / GRASS

ROCKS IN THE TREAD

STANDARD WHEELS

THE WHYS AND WHEREFORE'S

FLOTATION

TRACTION

A TIRE IS DESIGNED FOR FLOTATION AND TRACTION.



Flotation is the tire's ability to stay on top of dirt, sand and the like.



Traction is the tire's grip on the ground.

INFLATION

WRONG INFLATION IS THE MAIN CAUSE OF DAMAGE... AND, BECAUSE IT'S SO EASY TO CHECK,

KEEP THE AGE & SPECIFIC REQUIREMENT OF AIR...

YOUR TIRES ARE THE KEY TO YOUR TRUCK AND THE KEY TO YOUR LIFE.

YOUR AGE IS IMPORTANT... KEEP THE RIGHT AIR IN IT AT ALL TIMES.

ALL TREAD DAMAGE SHOULD TREAD ROAD.



OVERINFLATION

AN OVER-INFLATED TIRE FITS ONLY THE CENTER OF THE TIRE IN CONTACT WITH THE ROAD!

YOU GET LESS AREA IN THE CENTER ...
WHILE THE BODY HELD OVER BOUNDS!



OVER-INFLATED TIRES CAUSE HARMFUL EXCESS ... WHICH CREATES VIBRATION ... WHICH LOOSENS BOLTS - BRIMS, DRUMS ... ETC.

YOU WASTE FUELING POWER TOO!

WHAT (NAME) IS OVER ...
BRAD WILL SHIP THESE

YOU GET MORE TRACTION BECAUSE LIPS OF THE TIRE IS GRIPPING THE ROAD!!

LOOKS GOOD TO ME!

DON'T GO BY LOOKING ALONE ...
CHECK YOUR TIRE ... IT'S RIGHT FOR THE VEHICLE!

UNDER INFLATION



THE WORST OF THIS IS... THE DAMAGE USUALLY DOESN'T SHOW UP UNTIL TOO LATE... LIKE A BLOW OUT!

Overinflating of the walls causes the fabric of the walls to break.



ONE - DAY

FIVE YEARS



... AND NEXT BLOW UP FROM THE CONSTANT FLEETING OF A "LOW" TIRE... NEXT BOSTON'S NUMBER!



PRESSURE TO GO UP SINCE I CHECKED IN THE MORNING, NOW YOU'VE TO OFFSET THE BUILD-UP

NO! NEVER BLEED A HOT TIRE! IT'LL ONLY RAISE THE TEMPERATURE STILL HIGHER... AS YOU CONTINUE TO GO! WANT ALL THE TIRE ACIDS... THEN CHECK AND ADJUST THE PRESSURE.

THE DRIVER

Even with the best possible maintenance of truck tires, the service they deliver is mostly up to the driver. Poor driving habits can cause serious tire damage. Proper driving can do much to save rubber. Good drivers follow these tire-saving practices:



Check for flat, or soft tires, or leaks.



USE YOUR Tires to TELL YOU WHAT'S GOING!

Drive slowly and do not spin wheels.



Drive at moderate speeds.



No spinning your wheels leads to one bill of large sharp-edged chunks later.



Keep oil, grease or grime off tires.



Check when vehicle equipment is not the best.



KNOW YOUR TIRE FROM SERVICE BOOK



KNOW THE TIRE'S REASON



Never JUMP YOUR LOAD

SPREAD LOADS EVEN



Report evidence of overloaded wheels or other abnormal conditions you notice when driving.

TIRE INSPECTION

Is there any oil, grease or grime in the tire tread?

Are any of the tread bars missing? If so, the tire needs to be replaced.

A GOOD TIRE INSPECTOR NOT ONLY LOOKS FOR SIGNS OF TROUBLE BUT WILL REPORT DAMAGE THAT EXISTS... AND HE ALSO SUGGESTS WAYS TO PREVENT IT!

FROM

THE NEW YORK MOTOR VEHICLE SERVICE, WE'RE SHOWING UP SECOND-LINE TIRE BEING OVER-INFLATED.

Is there any tread wear, even if it's in only one spot?

SOME THING'S BEEN WEARING THEM... AND GET A WHEEL ALIGNMENT BEFORE YOU DRIVE IT AGAIN.

CRACKS



CRACKS
AND

Are the tread bars or chunks?

Is anything visible between the treads?

Will the rubber ever be softer with some parts being harder?

Is there anything unusual about the tread pattern or wear?

Are any chunks lost?

LOOKS LIKE TROUBLE.



If any of these conditions exist, they should be corrected before returning the vehicle to service. They are all detrimental to good tire service, and in some cases, downright dangerous. Debris or loose bits, for instance, can fly off with enough force to kill or injure.

A slow leak may be caused by a faulty valve core and can therefore be corrected without removing the tire. Even a slow leak in one of a vehicle's wheels drives extra load on its mate. It's important to keep our foreign matter and to make sure that every valve has a good valve cap and that the cap is screwed finger tight.

WHEELS AND TIRES



When steel tires are of unequal circumference, the larger tire carries the greater load. It's subjected to undue wear and punishment. This may result in the failure of both tires, because the sudden failure of the larger tire from the undue strain will automatically shift the burden to the smaller tire. You measure tires for matching loads by measuring the circumference with a flexible steel tape.

Table 10. — Matching Load Tires

Single diameter of tire.	Permissible Difference	
	In diameter	In circumference
Under 20 inches.	1/16 inch	1/16 inch
From 20 to 40 inches.	3/16 inch	1-1/16 inches
Over 40 inches.	1/8 inch	1-1/8 inches

WHEEL ALIGNMENT



TOE-IN — The wheels on the same side are closer together in the front than they are in the rear. Excessive toe-in shows feathered edges on inside edge of the steel design, especially more pronounced on right wheel tire.



CAMBER — This is the tilt of the wheel. **Positive camber** — wheels are closer together at point of road contact. **Negative camber** — wheels are closer together at top, but road contact results in uneven wear on one side of tire.



TOE-OUT — The wheels on the same side are closer together in the rear than they are in the front. This shows feathered edges on outside edge of the steel design. Usually it's more pronounced on left wheel tire.



CRACKS — This is the horizontal tilt of the axle. Too little motor causes wheel to wobble or wobble, resulting in spotty wear. Shopped motor causes wheel to pull to one side, resulting in excessive and uneven wear.



SPRING OR LEVER AXLE—Either of these suspension systems ensures distribution of the load. A spring or coupling axle will cause the trailer to flex to carry the quarter load.



LEVERING EFFECT—Rolling out of alignment and out-of-round brake shoes cause the trailer to wear rapidly in spots. Out-of-round brake shoes usually wear out first in a single spot. Improperly adjusted brake pads wear uneven places. Get all balance tires and wear even spots.



SPRING OR TORSION BAR—Cooper replace uneven load wear.



NOISE, SHOCK, BUMPING, LOOSE SPACED WHEELS AND U-BOLTS, UNBALANCED OR WOBBLING WHEELS CAUSE UNEVEN TREAD WEAR. AT THE FIRST SIGN, CALL YOUR MECHANIC.

CHOCK WHEELS

Overloading is the cause of many kinds of road body trouble. It's the main cause of all tire abuse. Such trouble is due to abnormal flexing or overworking of the road body of the tire. Normal flexing of a tire can go on indefinitely without causing any appreciable change to the cords. But if the tire is overworked or overflexed, abnormal heat is generated and the cords become fatigued and break.



Improper load distribution also shortens tire life. It overloads the tires on one side of the truck or trailer when that side is required to carry more than

its share of the load. This may affect steering, may make wheels slip on light silt and cause tires to wear faster.

Remember, too, that the gross load may not be on gross, yet one axle or one side of the truck, or one wheel, may be overloaded due to improper distribution of the load. The things to do are . . .



1. Balance the loads according to weight across the width of the body.



2. On cantilever axles, distribute load on each side and the fifth wheel carries its share according to coupling capacities of tires.

TUBES

Make certain that both the end and tube are clean before mounting, and clean end of valve before applying air hose to prevent dust and dirt from being blown into the tube.

**DO NOT OVERFLATE
SPECIAL TUBE
TESTING**



MOVING TIPS



1. Make sure the tire bead and inside of the air clean. Taper grease for the tube and the air-gate.



3. Insert the valve and push it firmly against the rim. Hold it in this position and inflate to pressure listed in your vehicle's tire.



2. After mounting your tire, take air into the tire, inflate the tube to about 15 pounds. Then check to see that the tire's seated right on the rim—all around and both sides.



4. Always use a safety cap or safety chain when inflating a tire that has a rim locking cap.

5. When mounting tires, angle valves always point toward the accessible flange of rim. Valves that are offset to tubes are placed to match the offset valve hole of rim.

6. Inflate tires every 4,000 miles. (See TM 9-1076-1, page 14.)

THE MAIL

You'll be right up to speed with "the wheels" if you've placed this letter reliably in your mailbox. But, you'll be even a better all-around PM man if you're checking your TM 9-1076-1 (MCH 14 Feb 87) when a question comes up. This TM, "Care and Maintenance-Of Personnel's Tires" plus its changes with a great Federal Index when you're in PM need are when a day's duty is over.



DON'T TELL ME MY JOB... I'VE GOT YOUR EXPLOSION!



TIRES + HEAT = POW!

Never—like never ever—let your welder do any welding or torch cutting on or around wheels that have inflated tires on 'em.

Welding or torch cutting around tires can produce a deadly explosion. So—forward!

Another thing—if your buddy's thinking about using your favorite sealant like alcohol to prevent leaking of water in the air compressor, stop him. Alcohol in an air compressor could ruin the machine, plus set up a real dangerous explosive alcohol-filled minefield! Drive on that water, like the TM says.

TIRE VALVE POSITION

WHERE'S THAT SPINNING WHEEL?

Dear Staff Sergeant,

What you mean is the one on a wheel with a spin locking ring, and you required to position the tire valve 180 degrees (directly across) from the spin?

148 G, G, B.

Dear Sergeant G. C. B.,

There's no such requirement that I know of.

You may be thinking of para 21 in TM 5-1870-1 w/Ch 5 (Feb 87), which tells you to position the outer wheel tire valve 180 degrees from the inner wheel valve on dual wheels.

The TM explains that this makes it easier to locate the inner valve in the dark.



Handwritten signature: G. C. B.

controls that stop...

STOP CLOBBERING DIESELS



Uncontrolled power can clobber a diesel or multifuel engine real quick—and you better believe it!

Forcing a compression-ignition engine past its rated and governed maximum RPM limit is a game of Russian roulette. It's a matter of chance when the blow.

Mechanically, occasionally overpowers an engine enough to cause its destruction—but strap a diesel and multifuel hot rodred up with heavy push rods, heated crankshaft, cracked pistons and popped connecting rods.

One of the biggest causes of this engine beating is using the engine for hold-back braking power on a down-grade—forcing the RPM beyond its limit. (FWD)

Many full-versions have been held down the advantages and benefits of engine braking power on a down-grade with a loaded vehicle, particularly by operators who were trained on gasoline engine-powered equipment.

They start by it.

The operating a diesel or multifuel-powered rig is another thing!

It's not that a compression-ignition engine doesn't give some resistance for hold-back power like a gas job—it's the principle of operation that's involved. It restricts the effectiveness of the engine's braking capabilities.

Mechanically both are similar as far as moving parts are concerned but the similarity stops there.

Unlike gasoline-powered jobs, the diesel or multifuel creates no vacuum type drag during its air intake cycle. And it produces power throughout the power

stroke cycle. This makes it a big matter for the weight-pushing and gravity-pulling of a loaded vehicle during a down-grade run to force the engine beyond its maximum rated RPM limit.

When a compression engine over-speeds, the valves can go into a float condition and remain open—then get smashed by an opening piston. Or the uncontrolled speed generated can overstress metal parts and snap 'em.



ENGINE WITH LOADED HEAVY TRUCK

In your operation of diesel or modified equipped rigs, trucks, dozers, scrap loaders or what-not, please take note. Avoid using the engine for braking power—in excesses in under no load conditions just to check the brakes or raise similar dies. You old hands on gasoline rigs have got to update your operating techniques when advancing to a diesel or modified.

On down grades with a diesel or modified equipped rig, the traveling speed and gear range have to be coordinated with the engine RPM while using the foot brake for control.



Why bother a good diesel or modified—then to control it by keeping within its operating speeds and RPM.

SOME LIKE IT HOT



A simple thing like a gasket can make a difference between hot food and cold food. So if you want your food to be hot instead of cold, better replace those gaskets on your 1-gal insulated food containers (P/N 7150-215-2411) when they start losing their life.

These gaskets will last longer if you keep 'em clean. When you clean your container and leaves, take the gaskets out and wash them good with soap and water. Put 'em back with the flat side down, and let them dry in place, to keep 'em from warping and losing their shape.

Here are the replacement items:



YOUR GO BETWEEN



You use a DA Form 3158 to report an apparatus error, recommend a change, or suggest an improvement in your publication. When you've checked down all items, and still can't be sure where to send it, mail it to The Adjutant General, Attn: ADASIP, Department of the Army, Washington, D. C. 20315. Ch 12 (The GSI) in AR 310-7 gives you the word.

How to Make It

A sturdy shovel is an essential instrument of any trenching party, should be pointed, and have teeth like the flat end of the cutting edge. We have selected the M-542 and the M-543 and these shovels are the best. Get your copy of *Handy & Handy* today.

LOCAL SHOP AVAILABLE BY YOUR CO. IS ABOUT AS NEARLY AS YOU CAN GET.

HERE'S A TIP BY

Head part—Remove or smooth edges and burrs and round corners for buffing with a wire brush. When working or grinding, sharpen the cutting edges, but don't remove more than $\frac{1}{8}$ inch from the original length of the head, or $\frac{1}{4}$ inch from the length of the shank or grip.

Head part—Clean off dirt and grease and look for cracks, splinters, chips and burrs. Look in a cross-section of the splintered, chipped and worn areas. Lighter or lighter brown or rusty color. Replace damaged or handle and these shovels treated with wood preservative or charring agents, or linseed oil. M-542 and M-543 will get you a single set or handle. You'll find it in the M-542 and M-543 sets.

Look up the place where the original handle has been with your shovels. Check with the M-542, M-543, M-544 (single handle) for both wood and metal parts.

INTRENCHING TOOLS



TAKE A LOOK AT FOOD CARRIERS WHILE YOU'RE DOING YOUR HOUSEWORK.

BRING OUT YOUR BEST BAKERY AND MILK.

THE MESS KIT IS MADE BY LEAVING THESE PARTS



THEY ARE MADE BY LEAVING MATERIAL ON EACH SIDE OF STEEL AND PLATING IT. NIGHT MESS KIT PARTS FULL CARRY ENOUGH TO FEED - ONE MAN.



REPLACE IN HASTE

HOW'D I KNOW
THE NEW GAGE I'M
PUTTING IN IS A
GOOD GAGE?

LOOK AT
THE RED
DOT I PAINTED
ON IT.

Playing it safe means you replace the pressure gage assembly on some of the earlier models of the MIG burner units, that were made under Contract DSA 441254STP521, dated 20 Sep 65.

Gages on the two-tank type and those "U" tanks under the 1961 contract have soft scales and could crack when you turn the flame too high.

If you're not sure whether the gage has been replaced by a new one or will last the old one, don't take a chance. Replace it with a new type gage. Order Gage, Air Pressure, RSN 7348-005-

1263, Area. TM 13-1560-204-01 (Rev. 68).



Put a dot of red paint on the top of the new gage so you'll know it's a good gage.

TM 743-971-2 (Apr 65), RSN Digos, gives the word for this replacement.

STRAY MIG SETS

WE HAVE ONE
MIG WELDING SET
FOR SALE 343-079-0488.



Property-book numbers under MIG welding sets under RSN's 1431-079-0488, 1431-121-5878, 1431-837-1973, 1431-837-5078, and 1431-093-0888 are expired. All sets take LSN Y481 08, like the other MIG sets in 58-790-26. The expired sets are being loaned by the MR. Plumbers, you know.

Connie Radd's BRIEFS

HEY, COME —
WE GOTTA
ASSISTANCE
PROBLEM!

Pushing by the Numbers

Start a paid pushing for the TA 202 line pack of your 28-22 FT or follow-off what you need is FOM 5825-995-8725. It gets you the pushing for the retractable cord opening. It'll cut down trying to cover the packs, which don't have a hinged opening.

Hot Stuff on M151

You're busy out of step if you don't have Ch 1 (Feb 87) to TA 9-228-218-22P for your M151 and other G808-series 1/2-ton vehicles. There's some big changes on Prescribed Load Allowance, source codes and load life. And now you'll find FOM's for lots of the 1/2-ton's common hardware items and for some special parts themselves for "non-stock."

Right Balls for M151

Ball, generic, FOM 5820-715-859L is what you want when replacing 28-ozp generator balls on your M151 or other G808-series 1/2-ton vehicle. You get a set of 2 balls under this FOM. It's listed in Ch 2 (Mar 87) to SC 2000-9L. You'll have trouble if you try installing Ball, generic, FOM 5820-823-1297, listed in TA 9-228-218-22P w/ Ch 1 (Feb 87) — they're too short.

Lamp Heat Loaders

You can't go wrong if you mark 28 on your GA Form 2742 when ordering the outdoor working lamp-pack, FOM 2240-995-7824, for your 1/2-ton vehicles. Like it says in M1 723-22 (May 87), this 28 Advice Code tells the supplier, "Requested item only . . . Do not substitute." Some units have been getting red lamps or substitutes — and red just won't do the bill.

M35-A8 Flappers

Here's what you need to replace or repair mud flaps on your M35A8 2 1/2-ton cargo truck.

Complete assembly (flap, strip and shield) is General, splash shield, FOM 2240-995-8787, rubber flap with strip, FOM 2240-995-8788, shield only, FOM 2240-995-8789, screw, FOM 2000-342-2002, nut, FOM 2000-995-1488.

Trailer You, Classic To

Even though category line 2201B in TA 24-750 calls for records as "Trailer, All Types," it's not meant to cover classic types used only to get wheels under compressors, generators and the like.

Would You Stake Your Life ¹⁰⁰⁰ on
the Condition of Your Equipment?

ALL ARMY
PUBS ARE
VALUABLE...
THIS ONE
IS PRICELESS!



It tells you how to get the
others! Get it! Read it!
It's got the poop on pubs!

NEED:

- DA FORM 100-1, AFM, DA FORM,
Circulars, etc's
- DA FORM 100-2, Work Items
- DA FORM 100-3, DA, AF, AFM,
Circulars, etc's, etc's, etc's
- DA FORM 100-4, DA, AF, AFM, etc's
- DA FORM 100-5, DA, AF, AFM
- DA FORM 100-6, AFM's
- DA FORM 100-7, Circulars, etc's
- DA FORM 100-8, AFM's, etc's, etc's,
Circulars, etc's

Use these
to keep
current



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INDEX

- DEPARTMENT OF THE ARMY, Office, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI
- DEPARTMENT OF THE ARMY, Publications, DTI, DTI, DTI

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